

1.5 Inventories

1.5.1 Introduction

Various inventories currently exist that can be used for urban runoff management purposes. The Storm Water Pollution Prevention Program intends to use existing State and local databases to create useful tools to track and analyze the various program components. The inventories provide useful information to plan for the storm water Best Management Practices (BMPs) and facility storm water inspections. The City intends to incorporate the inventories into a geographic information system (GIS) so that the spatial relationships within drainage basins or watersheds can be easily seen.

The City and County of San Diego have been leaders in the GIS field dating back to the establishment of the Regional Urban Information System (RUIS), which is now known as SanGIS. The Storm Water Program currently uses this system to prepared maps for water quality monitoring, IC/ID investigations, aid in enforcement activities, and understand drainage characteristics. In addition, the City's storm drain conveyance system is contained in its GIS.

The inventories discussed in this component include construction sites, municipal facilities (including the storm water conveyance system), commercial and industrial facilities. Planned database activities are also presented. Site prioritization is also addressed for applicable components. The inventory requirements within the San Diego Municipal Storm Water Permit are as described in Table 1.5.1.

Table 1.5-1. Permit Requirements – Inventories.

Section	Requirement (Summary)	Permit Section
1.5.2	Develop a watershed-based inventory of construction sites.	F.2.d
1.5.2	Annual watershed-based inventory of municipal facilities and activities which generate pollutants	F.3.a.(2)
1.5.2	Annual watershed-based inventory of all industrial sites	F.3.b.(2)
1.5.2	Annual watershed-based inventory of high priority threat to water quality commercial sites/sources	F.3.c.(2)
1.5.2	Establish priorities based on threat to water quality	F.3.a.(3) F.3.b.(3)
1.5.2	Inventory of all high priority residential areas and activities	F.3.d.(2)
1.5.3	Develop a budget for storm water expenditures for each fiscal year covered by the Municipal Permit	F.8

Section	Requirement (Summary)	Permit Section
1.5.4	Document activities for Jurisdictional Urban Runoff Management Program Annual Report	I

The objectives of this component are to:

- Develop watershed-based inventories of construction sites, municipal facilities, industrial facilities, and commercial facilities;
- Incorporate inventories into GIS, including storm water violations and water quality databases which are being developed as a Copermittee model program,
- Routinely update the existing storm water conveyance system GIS layer and include structural storm water best management practices (BMPs).
- Define and refine prioritization approaches for industrial facilities, commercial facilities, and municipal facilities.
- Identify a phased implementation schedule and associated estimated costs needed to implement the Inventories component through the five-year life of the Municipal Permit;
- Document storm water pollution prevention activities conducted at the Inventories component, which will then be submitted annually to the Storm Water Pollution Prevention Program along with an annual activities report.

1.5.2 Activities

Following is a description of the City's existing inventories, planned inventories and prioritization process. The City views inventories as a tool to assist in identifying and locating facilities, prioritizing facilities according to their potential impacts to water quality in the storm water conveyance system, and allocating resources for outreach, inspection, and enforcement efforts. Because there are tens of thousands of facilities that are regulated within the City's jurisdiction, the inventory and prioritization tasks will require significant resources. It has been the City's focus to use its resources to bring all facilities into compliance across the board and build compliance databases on an as-needed basis, rather than use these resources to strictly develop storm water inventories. Therefore, the City plans to use available, existing inventories and expand, enhance and prioritize them as the program moves forward. The City will also move towards linking these databases into the GIS.

Existing Inventories

Storm Water Conveyance System Inventory. The City of San Diego has an existing inventory for the storm water conveyance system. The storm drain information is

contained on a list and on a GIS layer maintained by the Transportation Department. There are currently four layers contained in the GIS: storm drain pipes, storm drain structures, (storm drain) inlets, and (storm drain) outlets. Additional resources are needed to routinely update the layer information.

Storm Water Violation Inventory: The Storm Water Pollution Prevention Program maintains a database to track investigations and enforcement actions. The database is not currently GIS linked nor can it be sorted easily by watershed.

City Facilities Inventory: The General Services Department maintains an inventory of all City facilities. This database is not currently contained in the GIS.

Building, Grading, and Public Improvement Permits Inventory: The Development Services Department maintains inventories of building permits and grading and public improvement permits. The database is also not a good indicator of active construction. Projects remain in the database until bonds are released sometime after the project construction is completed. These databases are not currently GIS linked nor can it be sorted easily by watershed.

Construction Site Lists: The Engineering & Capital Projects, Metropolitan Wastewater and Water Departments also maintain construction project lists. These lists are not combined into a single database, not currently GIS linked, nor are they easily sorted by watershed.

Metropolitan Wastewater Industrial Pretreatment Program: A list of commercial and industrial facilities that discharge into the sanitary sewer system is maintained by the Metropolitan Wastewater Department. This database contains name, address, a narrative description of facility type, standard industry classification (SIC) code, permitting, and compliance data.

Residential Areas: The City's zoning maps, which delineate residential uses, are contained within the GIS. The data can be queried to provide specific numeric information.

Planned Inventories

This section provides a description of the inventories of the construction, municipal, and commercial/industrial inventory elements.

Construction Sites Inventory

Construction sites include any site where an activity requiring a construction permit from the City of San Diego, such as grading, excavation, clearing, road construction,

structure construction, or demolition results in the disturbance of soil. Within the City of San Diego, thousands of construction permits are processed annually for sites ranging in size from installation of new street lights to large, regional developments. Various City departments currently inspect these sites. The City's resources will be focused on maintaining a high level of compliance at these sites, therefore the Storm Water Program will utilize databases that are generated within the existing system and manipulate them as much as practical to fit the requirements of the Permit.

For ongoing projects, the City will utilize existing project lists generated in the following Departments: Development Services (Building Inspections Division), Engineering & Capital Improvements, Metropolitan Wastewater, and Water. For new construction sites, the Storm Water Program and Development Services will utilize existing databases generated during the plan check process. The Field Services Division will verify these databases during their inspection process. The construction sites in these databases can be grouped spatially by watershed.

The City's construction inventory database is included in Appendix 1.5-A.

Municipal Facilities Inventory

There are thousands of municipal facilities in the City ranging from community parks to operations yards. The Storm Water Program will utilize the General Services Department's inventory of municipal facilities. These municipal facilities are operated in multiple departments including:

- Fire Department
- Police Department
- Environmental Services Department
- Transportation Department
- General Services Department
- Parks & Recreation Department
- Metropolitan Wastewater Department
- Water Department

The inventory includes a location field containing the Thomas Brothers map grid that allows the inventory to be roughly sorted by watershed. A copy of the municipal inventory is provided in Appendix 1.5-B.

Technology Services maintains the City's GIS which the Storm Water Program utilizes. The GIS data is maintained in Arcview layers; those layers most frequently utilized by the Storm Drain Program include; jurisdictional boundaries, watershed basins, water bodies, transportation facilities, assessor parcel data, land use, and storm drain facilities. The Storm Water Program has used this information to develop a storm drain

map and dry weather sampling locations. The storm drain map and dry weather sampling locations are shown on Figure 1.5-A.

Commercial/ Industrial Facilities Inventory

The Storm Water Program will utilize existing databases, primarily from the Metropolitan Wastewater Pretreatment Program, to develop a commercial/industrial facilities inventory that will assist with education, inspection and enforcement efforts. Data from other existing databases, such as the States Industrial General Permit filers list, will be used to verify and enhanced the inventory. The inventory includes facility address and zip codes that can be used to roughly sort the facilities by watershed. Eventually, The City plans to link the inventory to the GIS. A copy of the commercial/industrial inventory is provided in Appendix 1.5-C.

This inventory will be updated on an ongoing basis using information from other databases and data collected during inspections. Updating the inventory will include using various available databases (States Industrial General Permit filers list, business licenses, trade organizations, mailing lists) to verify and enhance the database. The specific task elements included in updating the inventory are as follows:

1. Verify and enhance database using various sources
2. Assign missing SIC Codes
3. Cross-reference with NAIC
4. Group facilities into categories
5. Verify/update data with site inspections or phone/mail interviews

High Priority Residential Areas Inventories

The City will use existing zoning maps to identify residential areas. Using the GIS, the watershed boundary layer can be overlayed to sort residential areas by watershed. Initially, the City will view all residential areas as having the equal threat to water quality of receiving waters, however, over time and based on inspections, water quality data, and location, the City may focus compliance efforts on specific areas. A watershed-based map of residential areas is included in Appendix 1.5-D.

Prioritization Based On Threat To Water Quality

Because the prioritization of many of these elements require consideration of common parameters such as proximity to 303(d) Impaired Water Bodies, Environmentally Sensitive Areas (ESA), etc., these prioritization considerations are discussed initially in

this section. The prioritization process is then discussed individually for each of the elements.

Prioritization Considerations

Receiving waters within Environmentally Sensitive Areas (ESA) required special consideration with respect to prioritizing sites. ESAs are defined as follows:

1. CWA Section 303(d) Impaired Water Bodies. 303(d) Impaired Water Bodies are those in which the State Water Resources Control Board (SWRCB) has determined do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. Section 303(d) of the 1972 Clean Water Act requires that the state establish priority rankings for water on the lists and develop action plans, known as Total Maximum Daily Loads (TMDL), to improve water quality. The list of 303(d) Impaired Water Bodies can be found on the SWRCB website (<http://www.swrcb.ca.gov>).
2. Areas of Special Biological Significance, as listed in the 1994 Water Quality Control Plan for the San Diego Basin, including:
 - La Jolla Ecological Reserve
 - Heisler Park Ecological Reserve
 - San Diego Marine Life Refuge
3. RARE (Rare, Threatened, or Endangered Species) Beneficial Use Water Bodies. The RARE beneficial use status applies to habitats necessary, at least in part, for the survival and successful maintenance of plant and animals species established under state or federal law as rare, threatened, or endangered. These water bodies are defined in the Water Quality Control Plan, San Diego Basin, Region 9.
4. Multiple Species Conservation Program (MSCP) Preserves. The MSCP is a cooperative effort among the County and 12 other local jurisdictions and agencies, such as the U. S. Fish and Wildlife Service and the California Department of Fish & Game. The program addresses the potential impacts of urban growth resulting in natural habitat loss and species endangerment, and it creates a plan to mitigate for the future potential loss of covered species and their habitat due to the direct impacts of future development within the MSCP area.

Construction Site Prioritization

Initial prioritization of construction projects will be performed by the Development Services Department. During construction, the Field Engineering Division of the Engineering & Capital Projects Department will reevaluate construction sites periodically and reclassify them as appropriate. A detailed description of the prioritization process is provided in Component 3.4, *Construction Contracts*; an overview of that process is provided herein.

The City shall evaluate potential threats to water quality of all construction sites based upon the following criteria; 1) soil erosion potential, 2) onsite slopes, 3) project type and size, 4) sensitivity of receiving water bodies, 5) proximity to receiving water bodies, 6) non-storm water discharges, 7) sensitivity of water bodies, 8) methods, practices and past history of construction owners, and 9) any other relevant factors.

The City of San Diego has established a general guideline of categories to prioritize construction activities. Priorities will be established after consideration of the existing and surrounding conditions, the type of activities necessary to complete the construction and any other extenuating circumstances that may pose a threat to water quality as discussed above.

Municipal Facilities Prioritization

Prioritizing of municipal facilities will focus on fixed facilities that may perform activities that are at risk of causing pollutants to enter the storm drain system and for which there is an entity (owner, operator, or agency) responsible for the facility operations. The City of San Diego intends to address municipally owned facilities such as roads, streets and highways with public outreach/education. The Storm Water Program, in conjunction with the various departments that oversee municipal facilities, performs the establishment of water quality threat priorities. The prioritization criteria is based on; 1) type of municipal area or activity, 2) materials used, 3) wastes generated, 4) pollutant discharge potential, 5) history of non-storm water discharges, 6) size of facility or area, 7) proximity to receiving water bodies, 8) sensitivity of receiving water bodies; and, 9) other relevant factors.

The City will focus its efforts on municipal facilities that it considers high priority threat to water quality, including;

- Large regional parking facilities
- Areas and activities tributary to a Clean water Act section 303(d) impaired water body, where an area or activity generated pollutants for which the water body is impaired;

- Areas and activities within or adjacent to or discharging directly to coastal lagoons or other receiving water within environmentally sensitive area (ESA);
- Municipal waste facilities that are deemed to pose a threat to water quality of receiving waters, including:
 - Active or closed landfills,
 - Publicly owned treatment works and sanitary sewer collection systems,
 - Storm water conveyance system, including flood management facilities
 - Incinerators,
 - Solid waste transfer facilities,
 - Land application sites,
 - Uncontrolled sanitary landfills,
 - Corporation yards including maintenance and storage yards for materials waste, equipment and vehicles,
 - Sites for disposing and treating sewage sludge, and
 - Hazardous waste treatment , disposal and recovery facilities.
- Municipal airfields.

Commercial/Industrial Facilities Prioritization

The commercial/industrial database is prioritized based on the following considerations; 1) type of activity (SIC code), 2) materials used in the industrial processes, 3) types and quantities of waste generated, 4) potential to discharge pollutants, 5) authorized non-stormwater discharges, 6) size of the facility, 7) proximity to a receiving water body, and 8) sensitivity of the nearby receiving water body.

Following is a more specific description of the high, medium or low categories used by the City to classify industrial facilities.

A. Minimum High Priorities Industrial Sites

- Facilities that are tributary to an impaired water body listed in accordance with section 303(d) of the 1972 CWA, and generate pollutants for which the water body is impaired.
- Facilities that based on field verification, historical activities, violations, non-stormwater discharge evaluation, monitoring results (including field screening), complaints, or violations is considered at risk of contributing a significant pollutant load to the storm drain conveyance system.
- Facilities located within or adjacent to (i.e., within 200 ft.) a coastal lagoon or a receiving water body within an environmentally sensitive area (ESA), or does the facility discharge directly to these receiving waters.
- Facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Facilities subject to the statewide General Industrial Permit

B. Medium and Low Priority Industrial Sites

Industrial facilities that do not meet any of the aforementioned minimum high priority criteria are classified into lower priority groups. Medium priority sites are those that are pose some threat to water quality, but are not classified as “high” threat. Low priority sites are those whose activities have no exposure to storm water. In other words, all activities are performed indoors and no hazardous wastes or potential pollutants are stored on site.

C. High Priority Commercial Sites

The following commercial categories are considered high threat to water quality. There are a number of commercial categories listed below are already subject to inspections due to other existing program such as Hazardous Materials and Agriculture programs. Other categories represent practices, which are transient (e.g. mobile carpet cleaning, cement mixing and cutting, landscaping, painting and coating, pool and fountain cleaning, port-a-potty servicing). These transient activities will not appear in the watershed-based inventory. City of San Diego intends to address these transient activities with focused outreach/education and enforcement.

- Automobile mechanical repair, maintenance, fueling, or cleaning;
- Airplane mechanical repair, maintenance, fueling, or cleaning;
- Boat mechanical repair, maintenance, fueling, or cleaning;
- Equipment repair, maintenance, fueling, or cleaning;
- Automobile and other vehicle body repair or painting;
- Mobile automobile or other vehicle washing;
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Eating or drinking establishments;
- Masonry;
- Botanical or zoological gardens and exhibits;
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;
- Cemeteries;
- Marinas;
- Other sites that the City determines may contribute a significant pollutant load to the storm drain conveyance system;
- Any site or source tributary to a Clean water Act section 303(d) impaired water body, where the site generates pollutants for which the water body is impaired; and
- Any site or source within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an ESA.

1.5.3 Phasing

Year 1 (July 1, 2001 – June 30, 2002):

- Update GIS fields for ESA Receiving Water Bodies
- Verify SIC codes for industrial sites
- Cross reference NAIC codes for industrial sites
- Review and refine watershed inventories
- Assess threat to water quality priorities and revise, if necessary
- Review and refine water quality threat priorities of facilities in database
- Update inventories for Annual Assessment Form

Year 2 (July 1, 2002 – June 30, 2003):

- Verify SIC codes for industrial sites
- Cross reference NAIC codes for industrial sites
- Review and refine watershed inventories
- Assess threat to water quality priorities and revise, if necessary
- Review and refine water quality threat priorities of facilities in database
- Update inventories for Annual Assessment Form

Year 3 (July 1, 2003 – June 30, 2004):

- Review and refine watershed inventories
- Assess threat to water quality priorities and revise, if necessary
- Review and refine water quality threat priorities of facilities in database
- Update inventories for Annual Assessment Form

Year 4 (July 1, 2004 – June 30, 2005):

- Review and refine watershed inventories
- Assess threat to water quality priorities and revise, if necessary
- Review and refine water quality threat priorities of facilities in database
- Update inventories for Annual Assessment Form

Year 5 (July 1, 2005 – June 30, 2006):

- Review and refine watershed inventories
- Assess threat to water quality priorities and revise, if necessary
- Review and refine water quality threat priorities of facilities in database
- Update inventories for Annual Assessment Form

Actual implementation of the activities listed above is dependent upon identification of funding in future yearly budgets and City Council approval.

1.5.4 Annual Assessment

The following form is representative of the quantitative and qualitative measures that will be tracked by the Storm Water Program regarding the Inventories component in order to prepare the Jurisdictional Urban Runoff Management Program annual assessment. *These assessment factors and questions are presented for information only; some questions may be modified prior to each annual assessment period, and not all of the factors or questions below may apply to each component's responsible department(s).* Prior to each fiscal year, a tailored Annual Assessment Form will be distributed to responsible departments, and will include an Excel spreadsheet containing direct and indirect quantitative and qualitative measures similar to the example below. The Storm Water Program will provide a blank copy of the Annual Assessment Form and additional guidance to department management prior to the beginning of each fiscal year. Submission of this report will require department director approval.

Program Assessment Form - Inventories Component

QUANTITATIVE ASSESSMENT:

Quantitative assessment measures for inventories will be provided in their respective components (i.e. construction, municipal, commercial/industrial).

QUALITATIVE ASSESSMENT:

1. Describe the major accomplishments of the Inventories Component over the past year (for example; progress towards developing GIS, inventory activities, prioritization activities).

2. Summarize new activities or improvements to be implemented next year as a result of your self- assessment.

3. Other comments.

FINANCIAL ASSESSMENT:

Estimated annual storm water expenditures:

Personnel Expenditures: _____
Non-personnel Expenditures: _____

1.5.5 Appendices

Due to the size of Appendix A, B and C, the construction, municipal and commercial/industrial inventories, these appendices have been included in a limited distribution. Please contact the Storm Water Program to obtain a copy.